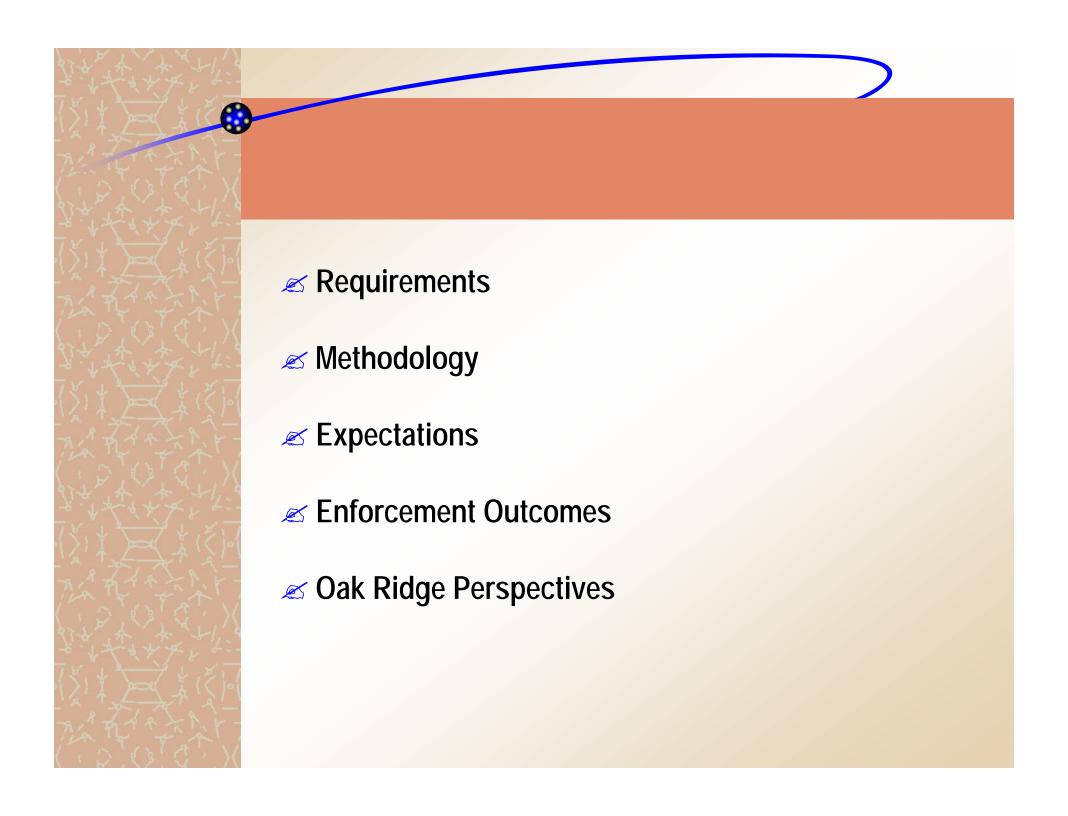
Causal Analysis Tony Weadock - OE Brenda Hawks - Oak Ridge



Requirements

- Why do a causal analysis anyway?
- 10 CFR 830.122 (c)(3) Quality Improvement criteria
- "...ldentify the causes of problems and work to prevent recurrence as a part of correcting the problem."

Methodology

- Graded approach
- Screen/ranking of problems
- ∠ Lower rank = less rigor
- "Apparent cause", "direct derivation"

Methodology II

- No DOE prescribed method for formal causal analysis.
- Commonly see Taproot, Reason, Phoenix, "Why staircase."
- NTS reportability typically drives the highest level of investigation/analysis.

Expectations

- Scope and depth appropriate
- Extent of conditions (EOC) review
- Precursor review
- Corrective actions flow from causes
- Formally documented

Scope and Depth

- Need to appropriately characterize and address the whole problem
- Need to dig deep enough
 - Don't stop at "failure to follow procedures"
 - Focus seems to be on procedures and processes, not on people
 - Issues of management, production or other influencing factors rarely explored

Scope and Depth II

- Blame often placed on individual worker; however, OE looks hard at the rogue employee defense
- Level of investigation and analysis commensurate with the problem

Extent of Conditions

- Look for same or similar problem in other facilities or operations
- Such reviews infrequently or inconsistently performed
- Situation specific EOC review would not make sense in all situations

Precursor Review

- Look for prior examples of problem, and developed corrective actions- why didn't they work?
- Should assessments have identified problem?

Corrective Actions

- Corrective actions should flow out of causal analysis
- **∠** Look for timely completion of corrective actions
- Verification of effectiveness

Enforcement Outcome

- Deficient causal analysis and corrective actions can lead to enforcement.
- QI citations have made up about 20% of all violations cited.

Enforcement Outcome II

Problems cited:

- Failure to do effective causal analysis
- Ineffective corrective actions leading to recurrence

Continuing OE emphasis on causal analysis

Closure Criteria

- Root cause has been determined and documented.
- Corrective actions taken address the root cause as well as associated deficiencies identified through the root cause analysis.

Closure Criteria II

- Corrective actions taken have acceptable evidence of completion.
- There is reasonable expectation that the actions completed will prevent recurrence of the issue.

Vague - Non-committal

- **∠** Submit xxx.
- Perform review of xxx.
- Change/revise procedure xxx.
- Evaluate procedures/documents for needed change/revision.
- Verify/validate actions complete.

Specific Actions

- Implement xxx after approval.
- Implement recommendations from xxx review or justify and document why recommendations are not necessary.
- Issue and implement change/revision to procedure xxx.

Specific Actions II

- Evaluate procedures/documents for needed change/revision. Document evaluation and implement needed changes/revisions.
- Verify/validate actions completed and implementation will reasonable prevent recurrence of the issue. [Verification and validation may be separate.]